1	2	3
Punjab	1.00	1.90
Rajasthan	0.82	1.62
Tamil Nadu	2.01	3.80
Uttar Pradesh	0.90	1.64
West Bengal	0.73	1.20
Delhi (UT)	3.15	6.45
Total	23.85	46.83

Developing new Windmills

2976. D. B. CHANDRE GOWDA: Will the Minister of ENERGY be pleased to state:

(a) whether the National Aeronautical Laboratory (NAL) at Bangalore has designed and developed innovative windmills;

(b) if so, what are the salient features of the proposed windmills;

(c) the States in which these windmills would be set up; and

(d) to what extent the conservation of energy through windmills will be useful?

THE MINISTER OF ENERGY (SHRI VASANT SATHE): (a) and (b) National Aeronautical Laboratory at Bangalore have designed and developed a water pumping windmill called "Samira" suitable for shallow water pumping in high wind areas. The windmill has a 7.5 m three bladed metal rotor with an auxiliary airfoil-sum-spoiler. Its rated discharge is about 20 cubic metre at a wind speed 25 kmph through a 2 HP centrifugal pump.

(c) A project for field trial involving 15 Samira windmills has been taken up by the Department of Non-Conventional Energy Sources, 10 in Andhra Pradesh and 5 in Orissa.

(d) It is estimated that on an average a water pumping windmill can save about 1.28 tonnes of diesel or 2000 kwh of electricity annually under favourable wind and site conditions.

Pending power projects of Madhya Pradesh

2977. SHRI AJIT P. K. JOGI:
THAKUR JAGATPAL SINGH:

Will the Minister of ENERGY be pleased to state:

(a) what are the power projects of Madhya Pradesh which are pending for approval by the Central Government as on the 31st October, 1988; and

(b) what are the reasons for the delay in their approval by the Central Government?

THE MINISTER OF STATE IN THE DEPARTMENT OF POWER IN THE MINISTRY OF ENERGY (SHRI KALPNATH RAI): (a) and (b) The details of power projects of Madhya Pradesh which are pending for approval and reasons therefor are given in the attached statement.

Statement

Sl. No.	Name of Project	Installed capacity (MW)	Reasons for pending clearance/investment approval
1	2	3	4
	Thermal		
1	Sanjay Gandhi (Birsinghpur) Extension	2-210-420	Techno-economic clearance of the Central Electricity Authourity (CEA) was given on 10-10-88 subject to fulfilment of following conditions :— (1) Linkage of coal for benefits during 8th Plan period.